



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/574,219

10/03/2006

Ulrike Schulz

P29299

2157

7055 7590 08/05/2011  
GREENBLUM & BERNSTEIN, P.L.C.  
1950 ROLAND CLARKE PLACE  
RESTON, VA 20191

EXAMINER

KARPINSKI, LUKE E

ART UNIT

PAPER NUMBER

1616

NOTIFICATION DATE

DELIVERY MODE

08/05/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/574,219  
Filing Date: October 03, 2006  
Appellant(s): SCHULZ ET AL.

\_\_\_\_\_  
Heribert F. Muensterer  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 6/13/2011 appealing from the Office action mailed 11/12/2010.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

Claims 46-48, 50-74, 76, and 77 are pending.

Claims 46-48, 50-74, 76, and 77 are rejected in the final office action mailed 11/12/2010.

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken is being maintained by the examiner.

**(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

**(8) Evidence Relied Upon**

7,294,330	Banowski et al.	11-2007
2002/0077372	Gers-Barlag et al.	6-2002
6,042,816	Shen	3-2000
5,571,841	Yu et al.	11-1996

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

**1. Claims 46-48, 50-61 and 64-74, 76, and 77 are rejected under 35**

**U.S.C. 103(a)** as being unpatentable over International Publication WO/2003/039505 to Banowski et al. For prosecution US Patent 7,294,330 to Banowski et al. will be used as an English language equivalent.

***Determination of the Scope and Content of the Prior Art (MPEP §2141.01)***

Banowski et al. teach antiperspirant compositions comprising an aluminum antiperspirant (col. 15, lines 33-44), an alpha-hydroxycarboxylic acid, including mandelic acid (abstract, col. 2, lines 5-15, and col. 4, line 64), and water (examples), as pertaining to claims 46, 67-69, and 74. Banowski et al. also teach said mandelic acid present at 2% (col. 4, line 61 to col. 5, line 15) and said activated aluminum chlorohydrate present at 10-25% (col. 15, lines 33-61), which reads on an aluminum to carboxylic acid ratio of 5:1 to 12.5:1, as pertaining to claims 46, 50, 51, 69, and 74.

Banowski et al. further teach aluminum chlorohydrate (col. 15, lines 33-44) as pertaining to claims 47, 48, 68, and 74, 1-40% antiperspirant compound (col. 15, lines 51-57), as pertaining to claims 49-54, 69, and 70, 0.001-10% alpha-hydroxycarboxylic acid (col. 5, lines 9-15), as pertaining to claims 49-51, 55, 56, 69, and 70, O/W microemulsions (col. 10, line 45) and gels (col. 10, line 34), as pertaining to claims 57-61 and 71, 0.5-15% emulsifiers (col. 15, lines 29-32) as pertaining to claim 59, oil components with low volatility (col. 12, lines 23-64), as pertaining to claim 60, addition

Art Unit: 1616

products of ethylene oxide or propylene oxide on linear fatty alcohols, which reads on polyethoxylated and polypropoxylated emulsifiers (col. 13, line 55 to col. 15, line 1), as pertaining to claims 61 and 63, application to the skin (col. 10, line 24), as pertaining to claim 66, antiperspirant formulations (entire disclosure and examples), as pertaining to claim 72, transparent emulsions, which read on a transparent hydrogel (col. 10, lines 54-55), as pertaining to claim 73, and said formulations as transparent (col. 10, lines 30-55), as pertaining to claims 76 and 77.

***Ascertainment of the differences between the prior art and the claims***

***(MPEP 2141.01)***

Banowski et al. do not explicitly disclose an example wherein the claimed components, at the claimed percentages are combined into a single composition. However, Banowski et al. do teach that all of the claimed components may be combined into a composition within the claimed percentage ranges.

***Finding of prima facie Obviousness Rational and Motivation***

***(MPEP 2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to select each component and combine them as instantly claimed because Banowski et al. suggests that the instant components can be combined or mixed together. In a prior art reference it is not necessary for all of the possible compositions to be exemplified in order for the art to render an invention obvious.

Regarding the ratio limitations, Banowski et al. teach percentage ranges for said components which render the claimed ratios possible.

Regarding the limitation of a low volatility oil component, applicant has not defined what a 'low volatility' is. Therefore the said limitation will be given its broadest interpretation. The disclosure of Banowski et al. teaches low volatility silicones as well as several specific compounds which may be considered having a low volatility.

Regarding the limitations to a yield point, Banowski et al. teach the same compositions which would necessarily have the same properties, including said yield point.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

**2. Claims 62 and 63 are rejected under 35 U.S.C. 103(a)** as being unpatentable over International Publication WO/2003/039505 to Banowski et al. in view of US Patent Publication 2002/0077372 to Gers-Barlag et al. For prosecution US Patent 7,294,330 to Banowski et al. will be used as an English language equivalent.

***Determination of the Scope and Content of the Prior Art (MPEP §2141.01)***

The teachings of Banowski et al. are delineated above and incorporated herein.

***Ascertainment of the Difference between Scope the Prior Art and the Claims***  
***(MPEP §2141.012)***

Banowski et al. do not teach mixing said compositions and heating to phase transition then cooling, as claimed in claims 62 and 63. This deficiency in Banowski et al. is cured by Gers-Barlag et al. Gers-Barlag et al. teach processes for producing O/W emulsions for deodorant and antiperspirant compositions [44] and [45]. Gers-Barlag et al. also teach that such microemulsions may be produced by mixing the oil phase, water phase, and emulsifier and heating said compositions until phase inversion is met [0072], [0082], and [0099].

***Finding of Prima Facie Obviousness Rational and Motivation***  
***(MPEP §2142-2143)***

Regarding claim 62, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the formulations of Banowski et al. by mixing, heating to phase transition, then cooling, as taught by Gers-Barlag et al. in order to produce the invention of instant claim 62.

One of ordinary skill in the art would have been motivated to do this because Banowski et al. teach compositions in microemulsion form and Gers-Barlag et al. teach processes for the preparation of said emulsions. Therefore it would have been obvious



Art Unit: 1616

to utilize the process of Gers-Barlag et al., to produce the formulations of Banowski et al.

Regarding claim 63, the presence of said emulsifier reads on this claim due to the fact that applicant is simply describing what an emulsifier does when mixed with an oil phase and a water phase.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

**3. Claims 46-48, 50-56, 64-70, 72-74, 76, and 77 are rejected under 35 U.S.C. 103(a)** as being unpatentable over US Patent 6,042,816 to Shen in view of US Patent 5,571,841 to Yu et al.

***Determination of the Scope and Content of the Prior Art (MPEP §2141.01)***

Shen teaches compositions comprising enhanced antiperspirant salts, which reads on activated antiperspirants, alpha hydroxycarboxylic acids, and water (col. 4, lines 8-43 and col. 6, lines 45-57), as pertaining to claims 46, 68, and 74. Shen also teaches aluminum to carboxylic acid ratio of 4.2:1 (col. 9, table 2) as pertaining to claims 46, 50, 51, 68, and 74.

Art Unit: 1616

Shen further teaches aluminum chlorohydrate (col. 5, line 23 to col. 6, line 12) as pertaining to claims 47, 48, 68, and 74, an antiperspirant to hydroxycarboxylic acid ratio of 6.25:1 (table 2b), as pertaining to claims 49-51 and 69, 18-45% antiperspirant (col. 7, lines 16-51), as pertaining to claims 52-54 and 70, 2-10% hydroxycarboxylic acid (col. 6, line 66 to col. 7, line 3), as pertaining to claims 55, 56, and 70, said formulations in clear gel emulsion form (col. 13, lines 56-62), as pertaining to claims 57-59, 71, and 73, compositions comprising an oil phase, a water phase and less than 20% emulsifier (example 8), as pertaining to claim 59, said oil phase having a low volatility (example 8), as claimed in claim 50, said compositions in antiperspirant formulations for topical application to the skin (col. 4, lines 39-41), as pertaining to claims 66, 72, and 74, and said formulations as transparent (col. 3, lines 61-65 and col. 14, example 8).

***Ascertainment of the Difference between Scope the Prior Art and the  
Claims (MPEP §2141.012)***

Shen does not teach mandelic acid as claimed in claims 46, 67, 68, 74, and 75. This deficiency in Shen is cured by Yu et al. Yu et al. teach compositions, including antiperspirants and hydroxycarboxylic acids and that said acids enhance the therapeutic efficacy of actives such as antiperspirants (col. 2, lines 16-30) and specifically recite mandelic acid (col. 3, line 20 and claims).

***Finding of Prima Facie Obviousness Rational and Motivation***

**(MPEP §2142-2143)**

Regarding claims 46, 67, 68, 74, and 75, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the formulations of Shen with mandelic acid as taught by Yu et al. in order to produce the invention of instant claims 46, 67, 68, 74, and 75.

One of ordinary skill in the art would have been motivated to do this because Shen teaches antiperspirant compositions comprising hydroxycarboxylic acids and Yu et al. teach that alpha-hydroxycarboxylic acids, such as mandelic acid, may be added to antiperspirant formulations to increase efficacy and to reduce skin wrinkles. Therefore it would have been obvious to utilize the mandelic acid of Yu et al., in the formulations of Shen in order to produce a composition with increases efficacy and reduce skin wrinkles.

Regarding the limitation of a yield point, Shen teaches the same formulations comprising the same components and percentages thereof. Therefore, Shen would necessarily have the same yield point as instantly claimed. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the same chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Regarding the limitation of a hydrogel, a hydrogel is viewed to be a gel comprising water. The compositions of Shen comprise water and may be in gel form, therefore these compositions read on hydrogel.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

**4. Claims 57-63 and 71 are rejected under 35 U.S.C. 103(a)** as being unpatentable over US Patent 6,042,816 to Shen in view of US Patent 5,571,841 to Yu et al., as applied to claims 46 and 68, in further view of US Patent Publication 2002/0077372 to Gers-Barlag et al.

***Determination of the Scope and Content of the Prior Art (MPEP §2141.01)***

The teachings of Shen and Yu et al. are delineated above and incorporated herein.

***Ascertainment of the Difference between Scope the Prior Art and the Claims (MPEP §2141.012)***

Neither Shen nor Yu et al. teach microemulsions as claimed in claims 57-59 and 71. This deficiency in Shen and Yu et al. is cured by Gers-Barlag et al. Gers-Barlag et al. teach processes for producing O/W emulsions for deodorant and antiperspirant compositions [44] and [45].

Further, neither Shen nor Yu et al. teach percentages of emulsifiers as claimed in claim 59. This deficiency is cured by Gers-Barlag et al. Gers-Barlag et al. teach the utilization of 0.05-10% emulsifier for said emulsions [129].

Further, neither Shen nor Yu et al. teach low volatility oil components within said emulsions as claimed in claim 60. This deficiency is cured by Gers-Barlag et al. Gers-Barlag et al. teach the utilization of vegetable oils, which have a low volatility, for said emulsions [178].

Further, neither Shen nor Yu et al. teach polyethoxylated or polypropoxylated emulsifiers as claimed in claim 61. This deficiency is cured by Gers-Barlag et al. Gers-Barlag et al. teach the utilization of polyethoxylated alcohols as preferred emulsifiers for said emulsions [129].

Further, neither Shen nor Yu et al. teach methods of making said microemulsions as claimed in claims 62. This deficiency in Shen and Yu et al. is cured by Gers-Barlag et al. Gers-Barlag et al. teach that such microemulsions may be produced by mixing the oil phase, water phase, and emulsifier and heating said compositions until phase inversion is met [0072], [0082], and [0099].

***Finding of Prima Facie Obviousness Rational and Motivation***  
***(MPEP §2142-2143)***

Regarding claims 57-59 and 71, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the combined

Art Unit: 1616

compositions of Shen and Yu et al. with microemulsions as taught by Gers-Barlag et al. in order to produce the invention of instant claims 57-59 and 71.

One of ordinary skill in the art would have been motivated to do this because Shen teaches antiperspirant compositions with emulsions and Gers-Barlag et al. teach microemulsions for antiperspirant compositions and methods of producing them. Therefore it would have been obvious to utilize the microemulsions of Gers-Barlag et al., with the formulations of Shen and Yu et al. in order to utilize a microemulsion specifically for antiperspirants.

Regarding the percentage of emulsifier, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the combined compositions of Shen and Yu et al. with less than 20% emulsifier as taught by Gers-Barlag et al. in order to produce the invention of instant claim 59.

One of ordinary skill in the art would have been motivated to do this because Gers-Barlag et al. teach microemulsions for antiperspirant compositions comprising less than 20% emulsifier in said formulations. Therefore it would have been obvious to utilize the emulsifier percentages of Gers-Barlag et al., with the formulations of Shen and Yu et al. in order to utilize a known amount of emulsifier.

Regarding the limitation of a low volatility oil component, applicant has not defined what a 'low volatility' is. Therefore the examiner will be reading said limitation in its broadest sense. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the combined compositions of Shen

Art Unit: 1616

and Yu et al. with a low volatility oil component as taught by Gers-Barlag et al. in order to produce the invention of instant claim 60.

One of ordinary skill in the art would have been motivated to do this because Gers-Barlag et al. teach producing microemulsions with low volatility oils. Therefore it would have been obvious to utilize the low volatility oils of Gers-Barlag et al., with the formulations of Shen and Yu et al. in order to utilize a known oil type.

Regarding claim 61, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the combined compositions of Shen and Yu et al. with a polyethoxylated alcohol emulsifier as taught by Gers-Barlag et al. in order to produce the invention of instant claim 61.

One of ordinary skill in the art would have been motivated to do this because Gers-Barlag et al. teach the utilization of said emulsifiers in microemulsions for antiperspirant compositions. Therefore it would have been obvious to utilize the polyethoxylated emulsifiers of Gers-Barlag et al., with the formulations of Shen and Yu et al. in order to utilize a known emulsifier for such compositions.

Regarding claim 62, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the combined compositions of Shen and Yu et al. with the processes as taught by Gers-Barlag et al. in order to produce the invention of instant claim 62.

One of ordinary skill in the art would have been motivated to do this because Gers-Barlag et al. teach processes for producing microemulsions for antiperspirant compositions. Therefore it would have been obvious to utilize the processes of Gers-

Art Unit: 1616

Barlag et al., with the formulations of Shen and Yu et al. in order to produce a microemulsion known to be used for such formulations.

Regarding claim 63, the presence of said emulsifier reads on this claim due to the fact that applicant is simply describing what an emulsifier does when mixed with an oil phase and a water phase.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

#### **(10) Response to Argument**

Appellant's arguments filed 6/13/2011 have been considered but are not found persuasive.

Appellant argues that Banowski et al. teach hundreds, if not thousands, of substances which are suitable as beta-glucuronidase-inhibiting substances.

This argument is not found persuasive because Banowski et al. teach a finite and reasonable number of substances. Further, when describing said substances, Banowski et al. recite hydroxycarboxylic acids first and when describing aromatic carboxylic acids, Banowski et al. recite mandelic acid first. While Banowski et al. may mention a large number of beta-glucuronidase-inhibiting substances, all of which would be expected to act in odor reduction, only a fraction of said substances are specifically



Art Unit: 1616

named, including mandelic acid. It is therefore reasonable to state that when selecting a substance to start with, one would choose one of the specifically named substances.

Appellant also argues that Banowski et al. teach a plurality of non-essential components, one of which is an antiperspirant.

This argument is not found persuasive because it is common in the art to combine deodorant actives with antiperspirant actives and Banowski et al. provides examples of antiperspirant compositions comprising an aluminum antiperspirant compound.

Appellant argues that Banowski et al. teach an unreasonable number of embodiments.

This argument is not found persuasive because Banowski et al. teach a reasonable number of embodiments which are only directed to deodorant and antiperspirant formulations. Banowski et al. also teach hydroxycarboxylic acids as the first beta-glucuronidase inhibiting substance and mandelic acid as the first aromatic carboxylic acid, as well as aluminum chlorohydrate as a preferred antiperspirant salt. Regarding other components, one of skill would have immediately recognized most of said components as functional equivalents of each other, such as the variety of oils, alcohols, emulsifiers, fragrances, etc.

In KSR, the Supreme Court reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”*Id.* at \_\_\_, 82 USPQ2d at

Art Unit: 1616

1395. The Supreme Court further stated that: If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability.

When considering obviousness of a combination of known elements, the operative question is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* at \_\_\_, 82 USPQ2d at 1396.

Appellant also argues that Banowski et al. name rosemary acid, ferulic acid, and para-hydroxymandelic acid as preferred.

This argument is not found persuasive because Banowski et al. recite only 13 aromatic carboxylic acids, mandelic being the first, and one of ordinary skill in the art would have been capable of envisioning the use of each of these compounds.

Appellant also argues that the instant claims recite activated aluminum chlorohydrate and the examiner relies on a citation of regular aluminum chlorohydrate and also that none of the examples in Banowski et al. use activated aluminum chlorohydrate.

This argument is not found persuasive because Banowski et al. teach activated aluminum compounds (col. 15, line 60), one of ordinary skill in the art is well aware of the availability of activated aluminum antiperspirants and Banowski et al. is not limited to the teachings of the examples..

Appellant also argues that Banowski et al. do not disclose any ratios of the antiperspirant active and the mandelic acid and also argues that while the percentages

Art Unit: 1616

of said components do provide a ratio that reads on the claimed ratio, the overlap of said ranges is small.

This argument is not found persuasive because Banowski et al. teach percentages of said antiperspirant and said mandelic acid which provide ratios that read on the claimed ratio. The fact that appellant feels the amount of overlap is too small is not persuasive because Banowski et al. implicitly teach the same ratios as claimed.

Appellant also argues that examples provided in Banowski et al. teach ratios outside of the claimed range.

This argument is not found persuasive because Banowski et al. is used for all that it teaches and is not limited to the teachings of the examples.

Appellant also argues that the only guidance Banowski et al. provides for a ratio of said antiperspirant and said mandelic acid is from the examples.

This argument is not found persuasive because Banowski et al. teach a percentage range for both the antiperspirant and the mandelic acid. One of skill would have been capable of altering said percentages within the disclosed range as desired to achieve the desired properties. The claimed ratio is within the taught percentage ranges and therefore would have been obvious to select.

Appellant also argues that there is no indication that said ratio is a result effective parameter.

This argument is not found persuasive because Banowski et al. teaches percentage ranges for both components within said claimed ratio and said ratio is found within said percentage ranges. Further, the modification of the amount of both said

Art Unit: 1616

antiperspirant and said acid is considered result effective variables, and one of ordinary skill would have been well aware of how the composition would be affected by increasing or decreasing the amount of said antiperspirant or said mandelic acid.

Appellant also argues that Banowski et al. provided no motivation to specifically select mandelic acid and an activated aluminum compound.

This argument is not found persuasive because Banowski et al. suggests that said compounds may be in the same formulation and Banowski et al. is not required to exemplify each composition in order to render them obvious.

Appellant also argues that there is no suggestion that activated aluminum offers any advantage over their regular counterparts.

This argument is not found persuasive because Banowski et al. teach that said activated compounds may be used and an advantage could simply be cost or availability of said compound.

Appellant also argues that by adding alpha-hydroxycarboxylic acid to compositions comprising activated ACH, in particular mandelic acid, no reconversion back to the non-activated form is seen.

This argument is not found persuasive because no data has been presented to show unexpected results in declaration form.

Appellant also argues that Shen teaches lower alkanolic acids preferably have 2-4 carbon atoms and mandelic acid has 8 carbon atoms.

This argument is not found persuasive because the abstract of Shen teaches that hydroxyl acids in general may be used. Further, Shen teach that said acids "generally

Art Unit: 1616

have from 2-6 carbon atoms". Finally, the mandelic acid of Yu et al. does not necessarily need to replace the hydroxy acid of Shen. Yu et al. teach that mandelic acid results in an increase in therapeutic effect of an active ingredient, including antiperspirants and that mandelic acid also treat age spots, keratosis, and wrinkles. Therefore the mandelic acid of Yu et al. may be added to the compositions of Shen in combination with the lower hydroxy acids of Shen.

Appellant also argues that there is no reason to replace the acids of Shen with mandelic acid and that there is no structural resemblance.

This argument is not found persuasive because the mandelic acid of Yu et al. may simply be added to the formulations of Shen and is not required to replace the acids of Shen. Further, the structural similarity would be irrelevant.

Appellant also argues that Yu et al. do not cure the deficiencies of Shen because Yu et al. teach a plurality of hydroxycarboxylic acids.

This argument is not found persuasive because, based on the teachings of Yu et al., one would reasonable expect ALL of the hydroxycarboxylic acids of Yu et al. to achieve an enhanced therapeutic effect of an active.

Appellant also argues that Yu et al. do not use mandelic acid in any examples.

This argument is not found persuasive because Yu et al. is not limited to the teachings of the examples.

Appellant also argues that there is no motivation to use the mandelic acid of Yu et al. in the compositions of Shen especially when the acids in said references are so different.

This argument is not found persuasive because it would have been obvious to use any of the acids in Yu et al. in combination with the lower hydroxycarboxylic acids of Shen in order to increase the efficacy of said antiperspirant. Yu et al. teach mandelic acid as the 5th representative acid that may be used, and therefore it would have been obvious to use the mandelic acid of Yu et al. in the compositions of Shen.

Appellant also argues that the ability of mandelic acid to visibly reduce skin wrinkles provides no noteworthy benefit for an antiperspirant composition.

This argument is not found persuasive because this is the appellant's opinion only. It is reasonable to state that an individual may very well be concerned with wrinkles in their armpits. Further, antiperspirant compositions are not limited to underarm application. Mandelic acid is taught as providing a skin benefit and therefore would be obvious to add to any topical skin care formulation in order to provide said benefit to the skin.

Appellant also argues that one of ordinary skill would have been discouraged in using mandelic acid in the formulations of Shen and has provided a reference that shows precipitation of mandelic acid with calcium in aqueous solutions.

This argument and reference is not found persuasive because if mandelic acid is added in addition to the lower acid of Shen then the lower acid of Shen would have complexed with the calcium and there would be no calcium complex with mandelic acid to be able to precipitate. Further, the examples of precipitation shown are to very specific formulations mixed under specific conditions and are not representative of the instant compositions or the compositions of Shen. Shen et al. teach gel formulations

Art Unit: 1616

which have much greater viscosities than aqueous solutions and salts generally do not precipitate out of gel formulations.

Appellant also argues that Shen means "soluble" as "soluble" not just "slightly soluble".

This argument is not found persuasive because appellant cannot know with certainty what degree of soluble Shen meant to convey. Further, slightly soluble is still soluble.

Appellant further argues that the addition of mandelic acid to the formulations of Shen would possible cause problems.

This argument is not found persuasive because the lower alkanolic acids of Shen would complex with the Calcium and therefore the mandelic acid would have nothing to complex with to have the opportunity to precipitate out.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616

Art Unit: 1616

Conferees:

/Luke E Karpinski/

Examiner, Art Unit 1616

/SREENI PADMANABHAN/

Supervisory Patent Examiner, Art Unit 1627